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T.R.

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/382,382 08/24/99 HEINRICH

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EXAMINER

BANGACHON, W

ART UNIT	PAPER NUMBER
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2635

DATE MAILED:

11/07/01

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

T.R.

Office Action Summary

Application No.

09/382,382

Applicant(s)

HEINRICH ET AL.

Examiner

William L Bangachon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☒ Claim(s) 7 and 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Examiner's Response

1. In response to the application filed 24 August 1999, the application has been examined. The Examiner has considered the presentation of claims in view of the disclosure and the present state of the prior art. It is the Examiner's position that claims 1-36 are unpatentable for the reasons set forth in this Office action:

Priority

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not state that the person making the oath or declaration in a continuation-in-part application filed under the conditions specified in 35 U.S.C. 120 which discloses and claims subject matter in addition to that disclosed in the prior co pending application, acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 CFR 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application. Applicant has not made reference to the CIP by serial number in the declaration.

Drawings

3. The drawings in this application are objected to by the Draftsperson as informal. Any drawing corrections requested, but not made in the prior application should be repeated in this application if such changes are still desired. If the drawings were

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changed and approved during the prosecution of the prior application, a petition may be filed under 37 CFR 1.182 requesting the transfer of such drawings, provided the parent application has been abandoned. However, a copy of the drawings as originally filed must be included in the 37 CFR 1.60 application papers to indicate the original content.

4. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings are required in response to this Office Action.

Information Disclosure Statement

5. It is noted that there is no PTO 1449 submitted with this application.

Claim Objections

6. Claims 7 and 34 are objected to because of the following informalities:
- The word "an" in line 2 of claim 7 does not appear to be needed.
 - In line 2 of claim 34, it appears that the word 'of' is needed between the words "more" and "the".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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8. Claims 1, 10, and 13 ^{cancelled} are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the tag antenna" in page 28. There is insufficient antecedent basis for this limitation in the claim.

Claims 10 and 13 recites the limitation "write broadcast command" in pages 32 and 33. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

^{Concede?}
13. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by US 4,691,202 (Denne et al).

Denne et al, in the same field of endeavor, discloses an identification system comprising an interrogator which transmits an interrogation signal to a plurality of transponders, each of which transmits an interrogation reply. Denne et al discloses the

claimed "transponder memory" in the form of RAM (70), thus implying a "transponder data location with a data value" operating as claimed {figure 5 and column 7, lines 34-39}. Denne et al provides the claimed "transponder receiver for receiving a signal" in the form of receiver 30 comprising a ferrite-cored inductor (L1) and tuning capacitor (C1) {figure 3; column 4, lines 43-46}. Furthermore, Denne et al teach the claimed "transponder sending a response if the sent data is different that the data value and the tag antenna not sending a response if the sent data is the same as the data value" by disclosing and claiming the transponder's functional operation "wherein in the event of correspondence between the retransmitted signal and the first signal, the transponder ceases transmission, and in the event of non-correspondence, the transponder continues transmission {column 11, lines 11-15}.

14. Claims 22, 27-29 are rejected under 35 U.S.C. 102(e) as being anticipated by US 5,550,547 (Chan et al).

With regard to claim 22, Chan et al in the same field of endeavor, discloses a multiple item RF tag identification protocol providing the claimed elements. Chan et al discloses the claimed "signal generator means" in the form of base RF from end (240) within his base station (110). Chan et al indicates that his RF from end (240) is used to "send and receive the RF signal (130) through the attached antenna (140) of the base station (110)." Thus implying the claimed "base station antenna," all operating as claimed {figures 1-2; column 4, lines 2-5}. Chan et al also teach that "if the base station

(110) identifies...(the response), base station application commands can be sent" {column 4, lines 31-33}, thus meeting the claim limitation for "transmitting a second encoded carrier if the base station receiver detects a response."

Claim 27 recites the limitations of claim 22 and is rejected for the same reasons, except for tag operation in response to an "unselect command," operating in the manner claimed {col. 4, lines 53-57}. Operation of Chan et al's base station (110) wherein it "listens for a response from one or more tags" is implied in the continued operation of the base station (110) as above.

With regards to claims 28-29, Chan et al teach the claimed functional limitation wherein the response causes the base station to (a) retransmit the encoded signal, or (b) generate an error code in the form of "other identification commands" designated as a "resend command" and a "fail command" respectively {col. 4, lines 60-65}.

15. Claims 6-8, 17-20 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,550,547 (Chan et al).

Claim 6 echoes the limitations of claim 22 and is rejected on the same basis considering that claim 6's base station transmission to "two or more tags" is within the scope of claim 22's base station transmission to "zero or more tags".

With regards to claim 7, it is considered that the claimed limitation wherein sent data includes information regarding object identification, description, use, tracking, location, status, and handling is a matter of design choice that would have been obvious to the artisan at the time of the invention.

Claim 8 echoes the limitations of claim 22 and is rejected on the same basis, except for the “computer that develops a select command” in the base station. It is considered that the operating combination of Chan’s base memory (220), base logic (230) and base station algorithm (300) within Chan’s base station (110) are functionally equivalent to the claimed “computer” as would have been obvious to one skilled in the art at the time of the invention, (figure 2; col. 3, line 55-col. 4, line 5). Chan also teaches the use of a group_select command (claimed “select command”) operating as claimed (col. 4, lines 53-60).

Claims 17-20 recite a method of operation corresponding to the apparatus of claims 27-29. The method claimed is obvious in that it merely follows the logical implementation of using the apparatus indicated in the claims in performing each of the functional operations of a base station sending a radio frequency signal to a field of zero or more radio frequency tags and issuing an unselect command that causes the tags in the field to respond.

Claim 18 echoes claim 28 and is rejected on the same basis.

In claims 19 and 20, with regard to addressing in pairs being preassigned is considered to be a matter of design choice which would have been obvious to one skilled in the art at the time of the invention.

Claim 30 echoes the limitations of claim 8 and is rejected on the same basis considering that claim 30's "plurality of radio frequency tags" is within the scope of claim 8's "zero or more radio frequency tags."

16. Claims 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,550,547 (Chan et al) in view of US 4,691,202 (Denne et al).

Chan et al discloses a multiple item RF tag identification protocol providing the claimed elements. Chan et al discloses RFID tag (120) providing a tag antenna/means for receiving a RD signal (410), a tag memory/memory means (460) operating as an RF receiver as claimed and implying "writing the sent data" as claimed. Chan et al further implies the claimed "tag transmitter means" by disclosing that antenna (410) is used to "receive and transmit an RF signal." {figure 4; col. 5, lines 1-10}.

Chan et al does not expressly disclose the functional limitation wherein the tag transmitter sends "a response if the sent data is different than an old data in the tag data location." The claimed "tag data location" is considered to be provided by Chan et al's tag memory (460) as above. The function of providing a transmitted response from a transponder when "sent data is different than an old data" is well known in the art as evidenced by Denne et al as discussed in claim 1 above. Given that Denne et al's and

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Chan et al's teachings are related in the same field of communications to and from transponders, it is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Denne's continued transmission from a transponder in the event of non-correspondence of data therein to Chan et al's RDID tag disclosure in order to improve reliability of transponder operation as suggested by Denne et al {col. 2, lines 39-45}.

17. Claims 2-5, 9-15, 16, 23-26, and 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,550,547 (Chan et al) in view of US 4,691,202 (Denne et al), and further in view of US 5,673,037 (Cesar et al).

Claim 23 echoes claim 21 and is rejected on the same basis, except for the limitation of "a tag logic having an active state and an initialize state" actuated by a designated "Select Command or an Unselect Command" respectively. Chan et al provides the claimed "tag logic" in the form of tag logic (430) {fig. 4; col. 5, lines 1-13}. The use of commands designated as "select" or unselect" commands to control the state of an RF tag is well known in the art as evidenced by Cesar's teachings relative to use of "group select" and "group unselect" commands respectively to simplify the identification of tags {col. 2, lines 47-50}. Reliance on Cesar's command designation teaching and applying such teaching to Chan et al in view of Denne et al's RFID transponder and related functionality is considered to be a matter of design choice by

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one of ordinary skill in the art for its respective advantages, such as speeding up system processing as suggest by Cesar {col. 2, lines 52-55}.

With regard to claim 24, "writing the sent data" as claimed is considered to be implied by operation of Chan et al's tag memory (460) set forth above {col. 5, lines 43-44}.

With regard to claims 25-26, "writing the sent data" is considered to occur when such data is "different" or does not correspond to data already present. Otherwise, writing data would be unnecessary. Accordingly, in such case, causing "the tag to send the response" as claimed is considered to be met by Denne et al's non-correspondence teachings as discussed above.

Claims 2-3 echo the limitation of claim 23-24 respectively and are rejected on the same basis.

With regard to claim 4, the claimed "decoder" is considered to be provided by Chan et al's command decoder (433) operating to decode a special command set from the base station, such command set considered to encompass an "Any Tag command" as claimed {fig. 4; col. 5, lines 18-20}.

Claim 5 echoes the limitations of claim 23 and is rejected on the same basis wherein claim 23's "RF signal" is considered to comprise both data and corresponding addresses as claimed.

Claim 16 recites a method of operation corresponding to the apparatus of claims 23-26. Selecting a sub-group of tags by sending a "select command" is considered to be taught by Cesar's teachings relative to sending "group select" commands and actuating tags as discussed above under claim 23. Writing of sent data simultaneously as claimed is considered to be met by Chan et al's teachings regarding "writing the sent data" as discussed under claim 24 above. Accordingly, the method claimed is considered to be obvious in that it simply follows the logical implementation of using the apparatus indicated in the claims in performing each of the functional operations of "selecting a sub group of zero or more tags in a field of tags by sending a select command" and "causing (such) tags... to simultaneously write the sent data to a tag memory."

Claims 9-15 are directed to a RFID system comprising tags and base station employing the apparatus of claims 2-8 and 21-30. Note that the scope of claims 9-15 is the same as or broader than that of claims 2-8 and 21-30 in every way. Thus, the inventive embodiments set forth in the system claim limitations of 9-15 are met by the cited references and associated arguments as set forth above and incorporated herein. Accordingly, it is considered that the limitations expressed in claims 9-15 would have

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been obvious to the artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 2-8 and 21-30 as discussed above.

Claims 31-33 recite a method of operation corresponding to the apparatus of claims 23-26, and echo the limitations of claims 34-36 except for the lack of repeating step (a) wherein the selected tags become active and the unselected tags remain initialized. Accordingly, claims 31-33 fall within the scope of claims 34-36 and are rejected on the same basis as discussed above.

Claims 34-36 recite a method of operation corresponding to the apparatus of claims 23-26. selecting tags by issuing "select and unselect commands" is considered to be taught by Cesar's teachings relative to sending "group select" and "group unselect" commands and actuating tags accordingly as discussed above under claim 23. "Issuing a write broadcast command" is considered to be implied by Chan et al's teachings regarding "writing the sent data" as discussed under claim 24 above. Accordingly, the method claimed is considered to be obvious in that it simply follows the logical implementation of using the apparatus indicated in the claims in performing each of the functional operations of issuing select, unselect, and write broadcast commands.

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Examiner Contact Information

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William L Bangachon whose telephone number is 703-305-2701. The examiner can normally be reached on 5/4/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 703-305-4704. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

William L Bangachon
Examiner
Art Unit 2635

November 5, 2001

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

